

All laboratory analyses were in accordance with methodologies outlined in the original proposal and EPA Quality Assurance Statement. They are summarized and referenced in Table 1. All nutrient addition bioassays were conducted with water collected at station 6, except December 1988 and October 1989 when station 5 water was used. Station 6 was chosen as the location for the bioassays because: 1) it is a representative mesohaline location in NRE, and 2) given budgetary limitations and logistic considerations, research efforts were limited to a specific segment of the A - P System, accessible by small boat, which could be rapidly deployed for sampling during daylight.

A. Physical and chemical field measurements

1. Vertical profiles (0.5 m intervals) of temperature, salinity, dissolved oxygen, and photosynthetically active radiation (P.A.R.; 400-700 nm) at stations 1, 5 and 6.
2. Vertical profiles (surface, 0.5m, 1.0m, 2.0m, 3.0m, 3.5m) at station 6, and surface samples at stations 1 and 5, of dissolved inorganic nitrogenous ($\text{NO}_2^- + \text{NO}_3^-$ hereafter referred to as NO_3^- ; and NH_4^+) and phosphorus (PO_4^{3-}) nutrients. Duplicate analyses were performed on a single sample from each depth.

B. Biological measurements

1. Surface samples for phytoplankton species composition, and enumeration at stations 1, 5 and 6.
2. Surface, as well as depth-integrated, samples for macrozooplankton (conducted by M. Mallin, partially